

## CHAPTER 59. EVALUATE PART 91 SUBPART K COMPANY MANUAL/REVISION FOR MAINTENANCE AND INSPECTION PROCEDURES

### SECTION 1. BACKGROUND

#### 1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

*A. Maintenance: 3302*

*B. Avionics: 5302*

**2. OBJECTIVE.** This chapter provides guidance for evaluating a fractional program manager (hereafter referred to as the program manager)/applicant's operating manual or revision to ensure that policies, procedures, and technical criteria meet regulatory requirements.

#### 3. GENERAL.

*A.* The operating manual should enable the program manager's maintenance and servicing personnel to carry out their duties at a high level of safety. The complexity of the manual will vary with the complexity of the operation. The manual must cover specific items in accordance with Title 14 of the Code of Federal Regulations (14 CFR), but may include additional items at the discretion of the applicant. A manual is therefore accepted rather than approved.

*B.* Manual acceptance can be a cause of delay in the issuance of management specifications (MSpecs).

*(1)* If the program manager/applicant does not have experienced and qualified personnel to prepare an acceptable manual, the use of a consultant may be appropriate. A consultant can be used in an advisory position only.

**NOTE: The program manager/applicant remains responsible for the manual and its procedures, whether or not a consultant writes the manual for them.**

*(2)* After the review, return the manual to the program manager/applicant with a list of any discrepancies found. Inform the program manager/applicant that issuance of MSpecs will not be completed until discrepancies are corrected. Aviation safety inspectors (ASI) should be concerned primarily with ensuring regulatory compliance.

#### 4. REVIEWING PROGRAM MANAGER/ APPLICANT'S MANUAL.

*A.* The manual is an administrative tool used to control and direct personnel. It should define all aspects of the maintenance operation.

*(1)* The policies and procedures section should address organizational matters.

*(2)* The maintenance section should address policies and procedures for administering the inspection and maintenance requirements, test flight requirements, and other subjects, as applicable.

*B.* The manual should include detailed instructions or specific references for accomplishing inspection and maintenance functions. It should also include forms, instructions, and references for recurring non-routine requirements such as engine changes and inspections following abnormal occurrences (hard landings, lightning strikes, severe turbulence, high brake energy stops, etc.).

*C.* Manufacturers' technical manuals provide instructions for accomplishing specific tasks. These documents also establish methods, technical standards, measurements, and operational test procedures. The policy and procedures section of the program manager's manual must describe areas of application for the pertinent technical documents.

*D.* The following are examples of manual sections and titles:

- General Policy and Procedures
- Inspection Procedures
- Maintenance Procedures
- Training
- Wiring
- Parts

- Overhaul
- Structural Repair
- Manufacturers or Vendors
- Weight and Balance Control
- Servicing

*E.* Manuals must be easy to revise and must show the date of last revision on each page. The manuals must have a page control system showing the number of pages and including the latest revision. The page control system is usually identified as a list of effective pages.

*F.* The program manager/applicant is responsible for ensuring that manuals present adequate guidance to meet all regulatory requirements. The program manager/applicant must understand and accept this responsibility early in the manual acceptance process.

*G.* An ASI may, when necessary, formally request revision to any part of the program operating manual when such revision is in the interest of safety, or when the manual does not meet regulatory requirements. This authority should be used only when the need for revisions is adequately substantiated by safety considerations or federal aviation regulation requirements and when informal discussions with the program manager fail to accomplish the necessary revision.

## SECTION 2. PROCEDURES

### 1. PREREQUISITES AND COORDINATION REQUIREMENTS.

#### A. Prerequisites:

- Knowledge of the regulatory requirements of 14 CFR part 91, subpart K
- Successful completion of the Airworthiness Inspector Indoctrination course(s), or equivalent

*B. Coordination.* This task requires close coordination between Airworthiness ASIs, and, in some areas, Operations ASIs.

### 2. REFERENCES, FORMS, AND JOB AIDS.

#### A. References:

- 14 CFR parts 43 and 91

*B. Forms.* None.

*C. Job Aids.* None.

### 3. PROCEDURES.

*A. Brief Program Manager/Applicant.* Provide the program manager/applicant with policies and regulatory requirements. Schedule and conduct a preliminary meeting, if necessary.

*B. Review Schedule of Events.* If this task is to be performed as part of an original issuance of MSpecs, review the schedule of events to ensure that the task can be accomplished according to the schedule.

#### C. Evaluate Operations Manual Requirements.

(1) Ensure that the program manager/applicant's policies and procedures manual describes procedures, levels of authority, and information appropriate to part 91, subpart K.

(a) The manual must include a description introducing its philosophy and goals. If it is in more than one volume, the manual must describe the division of contents between the volumes. The manual must also contain a list of effective dates.

(b) Manual revision and distribution procedures to provide current information to all manual holders are required. The manual must

include provisions to make it available to maintenance and ground personnel and to furnish a copy to the Federal Aviation Administration (FAA) Flight Standards District Office (FSDO) that issued the MSpecs.

(c) Significant terms, acronyms, or abbreviations unique to the manual must be defined. Common industry terms need not be defined as long as the common meaning is intended. Terms clearly defined in the text need not be included.

(2) The manual must detail requirements for program managers to ensure the appropriate parts of the manual are carried on the aircraft. If manuals are electronic or some other media, procedures must exist to ensure that computers or other required reading equipment are available.

*D. Ensure that the Manual Contains Required Organizational Elements.* Check for the following:

(1) The names of all management personnel authorized to sign applicable MSpecs and act on behalf of the program manager/applicant.

(2) Organizational charts, which must include:

- Lines of authority
- Maintenance organization and support structures
- If there is a Continuous Airworthiness Maintenance Program (CAMP), the names of the Director of Maintenance and the Chief Inspector

(3) Job descriptions for all elements noted above.

(4) Procedures for and a description of a training program ensuring that:

- All personnel, including inspection personnel, are fully informed of procedures and techniques currently in use
- All personnel are competent to perform their duties

- A method of documenting and retaining training records is established

*E. Ensure that the Manual Contains Compliance Procedures.* Check for the following:

(1) Procedures to ensure compliance with aircraft weight and balance limitations. These are to include:

- Pre-weighing and weighing requirements
- Necessary equipment
- Standards
- Forms and documents

(2) The program manager/applicant's MSspecs. The program manager may decide, however, to insert pertinent parts of its MSspecs or reference the MSspecs. This must be done in such a manner that they retain their identity as MSspecs (see part 91 § 91.1015).

(3) Procedures, policies, instructions, and controls for the use of the Minimum Equipment List (MEL).

*F. Evaluate Manual Contents.* The program manager's program manual must describe procedures and provide information appropriate to the applicable CFRs.

(1) The inspector must ensure that manual description and procedures meet the requirements of § 91.1025.

(2) The manual must describe the revision control procedures and how the distribution of manuals will be controlled.

(a) Manuals must be easy to revise and must have the date of last revision on each page. The manuals must have a page control system that shows the number of pages and ensures that the latest revision is included. The page control system is usually identified as a list of effective pages.

(b) Each program manager must prepare and keep current a manual. Program managers must make a copy of the manual, or appropriate portions of the manual (and changes and additions), available to their maintenance and ground operations personnel. If the manual is provided in other than printed form (e.g., electronic manual), the program manager must ensure that a compatible reading device is available to those persons.

(3) Any terms contained in the manual that are unique to the program manager's operation must be defined.

(4) The manual must include a chart or description of the program manager's organization. The organizational chart must describe, at a minimum, the management personnel and major functions. However, it is recommended that the chart cover the program manager's entire organization.

(5) The list of inspection personnel must include persons with whom the program manager has arranged to perform any of the required inspections, other maintenance, preventive maintenance, or alterations, including a general description of the work.

(6) The inspection program or maintenance program and a program covering other maintenance, preventive maintenance, and alterations must ensure the following:

(a) Maintenance, preventive maintenance, and alterations are performed in accordance with the program manager's manual.

(b) Competent personnel, adequate facilities, and equipment are provided for accomplishing maintenance, preventive maintenance, and alterations.

(c) Each aircraft released to service is airworthy and properly maintained.

(7) The manual must include the duties and responsibilities of appropriate members of the ground organization personnel.

(8) The manual must include programs that must be followed while performing maintenance, preventive maintenance, and alterations of the program manager's aircraft, including airframes, aircraft engines, propellers, rotors, appliances, and emergency equipment. These programs must include at least the following:

(a) A method for performing routine and non-routine maintenance (other than required inspections, preventive maintenance, and alterations).

(b) For CAMPs:

1. A designation of items of maintenance and alteration that must be inspected (required inspections). The designations should include at

least those items that, if maintenance is not performed properly or if improper parts or materials are used, could result in a failure, malfunction, or defect endangering the safe operation of the aircraft.

2. A method of performing required inspections and the occupational title(s) of persons authorized to perform each required inspection.

3. Procedures for reinspecting work performed under previous required inspection findings ("buy-back" procedures).

4. Procedures, standards, and limits necessary for required inspections and acceptance or rejection of inspected items.

5. Procedures to ensure that all required inspections are performed.

6. Instructions to prevent any person who performs work on any item from performing required inspection of that work.

7. Instructions and procedures to prevent any decision of an inspector regarding a required inspection from being voided by persons other than those listed below:

- Supervisory personnel of the inspection unit
- A person at a supervisory level of administrative control who has overall responsibility for the management of both the required inspection functions and the other maintenance, preventive maintenance, or alterations functions

(c) Procedures to ensure that required inspections, maintenance, preventive maintenance, and alterations not completed as a result of employee shift changes or similar work interruptions are properly completed before the aircraft is released to service.

(d) Instructions and procedures for maintenance, preventive maintenance, and servicing.

(e) Time limitations or standards for determining time limitations for overhauls, inspections, and checks of airframes, engines, propellers, appliances, and emergency equipment.

(f) Procedures for aircraft refueling, elimination of fuel contamination, fire protection (including electrostatic protection), and supervision and protection of passengers during refueling.

(g) Airworthiness inspections, including instructions covering procedures, standards, responsibilities, and authority of inspection personnel.

(h) Methods and procedures for maintaining the aircraft's weight and center of gravity within approved limits.

(i) A suitable system, which may include a coded system, providing for preservation and retrieval of information in a manner acceptable to the Administrator and which provides the following (Ref. § 91.1025(p)):

- A description of the work performed or reference to data acceptable to the Administrator
- The name of the person performing the work if the work is performed by a person outside the organization of the program manager
- The name or other positive identification of the individual approving the work

(9) Copies of MSpecs, parts D and E, are normally included in the manual. The program manager may decide, however, to insert pertinent excerpts of its MSpecs or reference the MSpecs. This must be done in such a manner that they retain their identity as MSpecs (Ref. § 91.1015).

(10) The manual must provide procedures for the reporting and correction of mechanical irregularities. These procedures must address the following:

(a) The recording of actions in the aircraft maintenance log (Ref. § 91.1113 ).

(b) The method of ensuring that the aircraft maintenance log is readily accessible to each flight crewmember.

(c) The MEL.

(d) The MEL placard system.

(e) Deferred maintenance.

(f) Airworthiness release procedures, or maintenance record entries in the maintenance section of the manual, that include a certification that:

- Work was performed in accordance with the requirements of the manual
- All items required to be inspected were inspected
- No known condition exists that would make the aircraft unairworthy
- So far as the work performed is concerned, the aircraft is in condition for safe operation

**NOTE: Rather than restate the above requirements each time an airworthiness release is executed; the program manager/applicant may state in the manual that the signature of a properly authorized person constitutes that certification.**

(g) The determination of qualifications and authorization of persons to perform airworthiness releases.

(h) Definition of when an airworthiness release is required.

(i) The form and manner in which an airworthiness release will be documented.

(j) Provision of a copy to the pilot-in-command.

(k) A list of required maintenance-related forms and the requirements for preparation.

(11) If the manager has a CAMP, the manual must provide the specifics of the program manager's continuing analysis and surveillance program, including the audit system and mechanical performance.

(12) The manual must include ferry flight limitations and procedures.

(13) The manual must provide procedures for the following:

- Reporting the occurrence or detection of each failure, malfunction or defect of mechanical reliability (mechanical reliability reports)
- Reporting each interruption to a flight, unscheduled change of aircraft en route, or unscheduled stop or diversion from a route caused by known or suspected mechanical difficulties (Mechanical Interruption Summary Report)
- Ensuring that reports of major repairs are prepared and retained by the program manager

(14) Test flight requirements and limitations are required to be in the manual. These include:

- Items requiring operational check flight
- Procedures for performing operational check flight

*G. Analyze Results.* Upon completion of review, analyze the results and determine whether the program manager/applicant's manual meets all requirements.

*H. Debrief Program Manager/Applicant.* Discuss discrepancies and advise what areas need corrective action.

#### **4. TASK OUTCOMES.**

*A. Complete PTRS.*

*B. Document Task.* File all supporting paperwork in the program manager/applicant's office file.

#### **5. FUTURE ACTIVITIES.** Normal surveillance.